

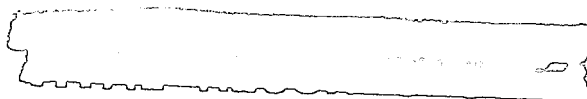
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IMAGERY
ANALYSIS
DIVISION

PIR

PHOTOGRAPHIC INTELLIGENCE REPORT



CHINESE POWER PLANTS

KIRIN PROVINCE

Declass Review by
NIMA/DOD



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CIA/PIR 65117

DATE APR. 1966

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CIA IMAGERY ANALYSIS DIVISION

CHINESE POWER PLANTS

KIRIN PROVINCE

- (A) Chang-chun Thermal Power Plant (Motor Vehicle Plant)
- (B) Chang-chun Thermal Power Plant (MEIC)
- (C) Kirin (Che-lin) Thermal Power Plant
- (D) Pei-feng Thermal Power Plant
- (E) Ta-feng-man Hydro Power Plant
- (F) Tung-hua Thermal Power Plant
- (G) Unbong Hydro Power Plant

REQUIREMENT

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CHANG-CHUN THERMAL POWER PLANT
(MOTOR VEHICLE PLANT)

NPIC NUMBER - 28-E1

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The Chang-chun Thermal Power Plant, located in the northeastern sector of the Chang-chun Motor Vehicle Plant at coordinates 43 51 40N - 125 16 00E, is rail served, coal operated and can apparently use oil as an alternate fuel. The power plant includes two wooden and one masonry or reinforced concrete natural draft cooling towers, four oil storage tanks, a main control house adjacent to the powerhouse with two and possibly three transformers, a sub-station with a small control house and two transformers, and the usual coal handling and treatment facilities.

The boilerhouse is equipped with four dust catcher units and four metal stacks, indicating four boiler units. Power leads were not observed between the generator hall and control house, but could be housed in an interconnecting gallery between the two buildings. Also, there are indications of an underground link between the generator hall and the sub-station located in the southern part of the power plant complex.

There has been no significant construction during the 1962 through 1965 period.

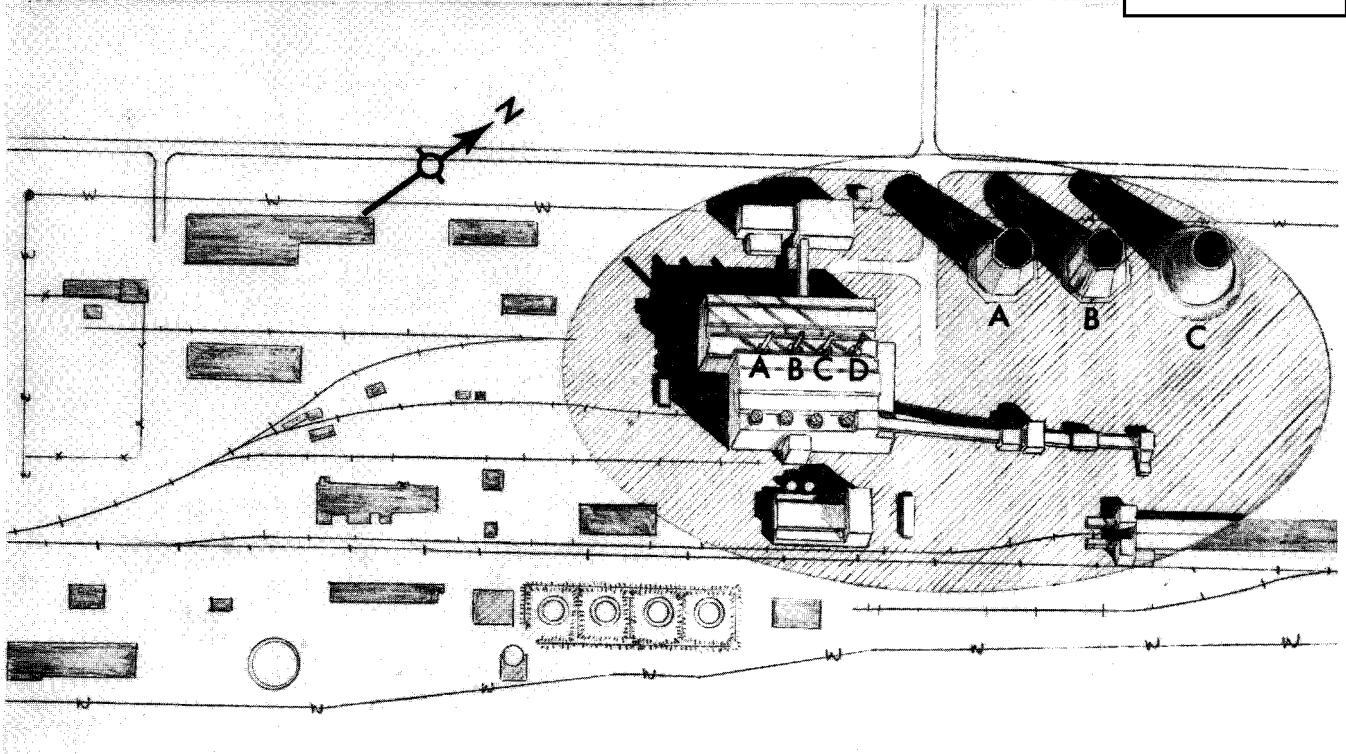
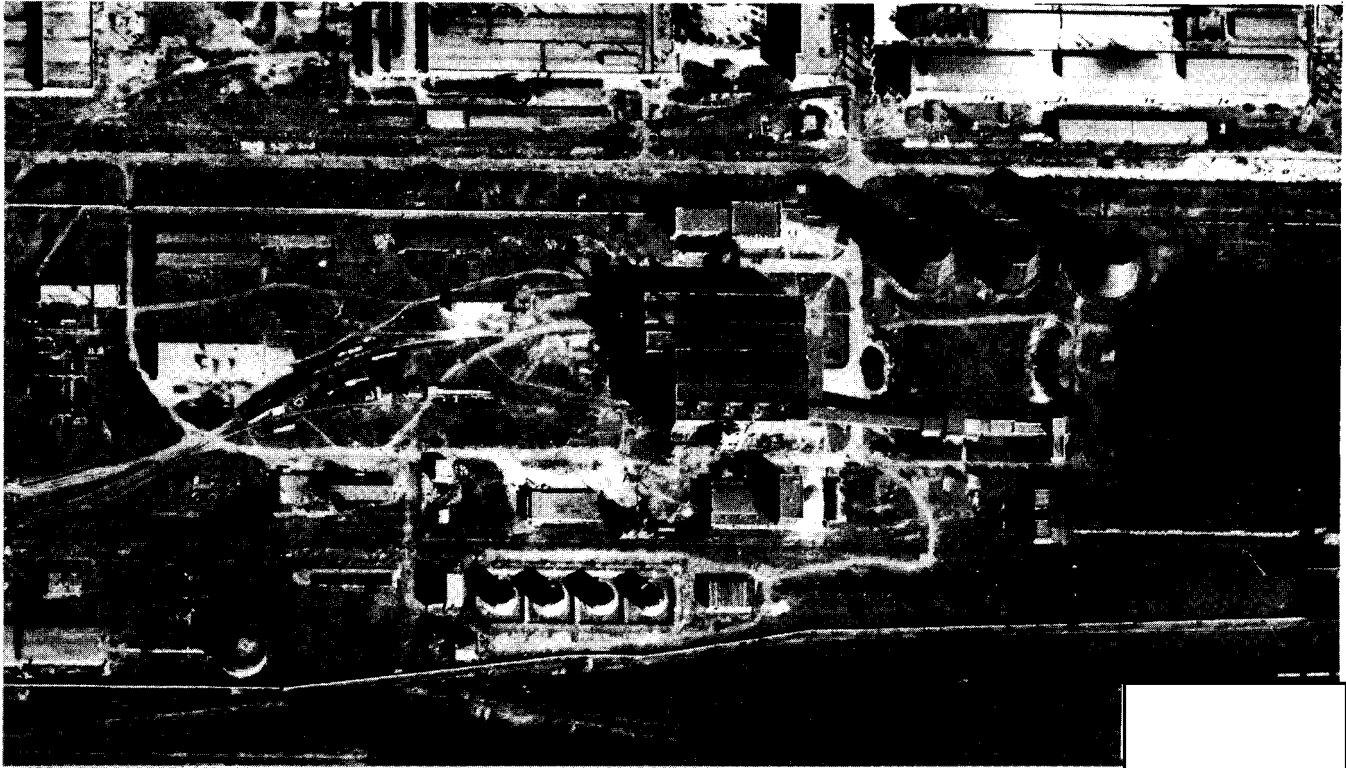
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FIGURE 2

CHANG-CHUNG THERMAL POWER PLANT
(MOTOR VEHICLE PLANT)



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CHANG-CHUN THERMAL POWER PLANT
(MOTOR VEHICLE PLANT)

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	Appears to be some sort of repair work on the center boiler units.	Possible light smoke from stack D. Light vapor from cooling towers A and B. Possible light vapor from cooling tower C.
	None	Moderate smoke from stack A obscures vision of stacks B and C. Moderate smoke from stack D. Moderate vapor from cooling towers B and C.
	None	No smoke observed. Light vapor from cooling towers B and C.
	None	Poor quality photography and clouds preclude analysis.
	None	No smoke observed. Light vapor from cooling towers A and B.
	None	Light smoke from stacks A, B, and D. Moderate vapor from cooling towers B and C.

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CIA IMAGERY ANALYSIS DIVISION

CHANG-CHUN THERMAL POWER PLANT
(MOTOR VEHICLE PLANT)

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Heavy smoke from stacks A, B, and C. Smoke from these stacks obscures stack D. Heavy vapor from cooling towers A and B obscures cooling tower C.
	None	Moderate smoke from stacks A and B. Light vapor from cooling towers A and B.
	None	Moderate smoke from stacks A and C. Moderate vapor from cooling towers A and B.
	None	Heavy smoke from stacks A, B, C, and D. Heavy vapor from cooling tower C.

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CHANG-CHUN THERMAL POWER PLANT
(MEIC)

NPIC NUMBER - 28-L

The Chang-chun Thermal Power Plant (MEIC) is located immediately north of the Chang-chun Central Railroad Classification Yards at coordinates 43 54 45N - 125 19 45E. The plant is rail served and will be coal operated when completed; no coal handling and processing facilities are currently present. The power plant contains an "L" shaped spray pond, control house with two probable transformers, a partially erected masonry cooling tower, sub-station and support/storage buildings.

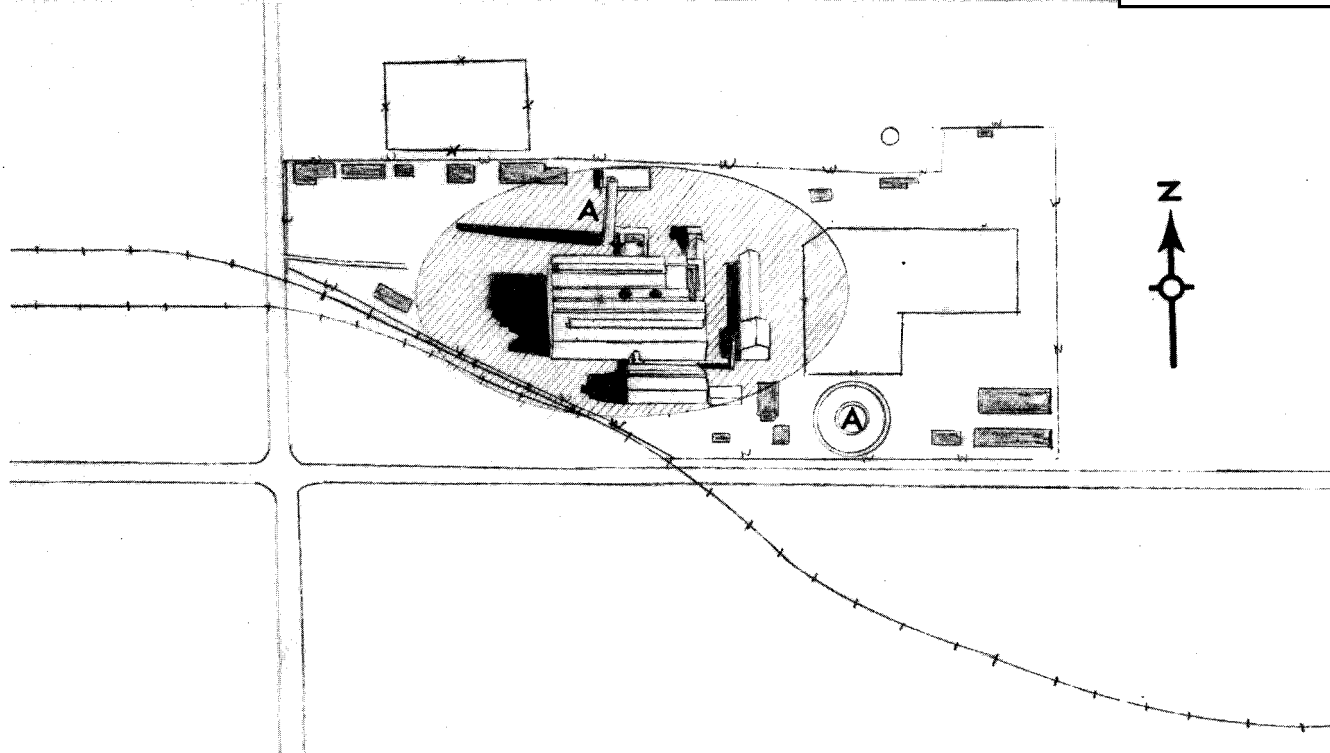
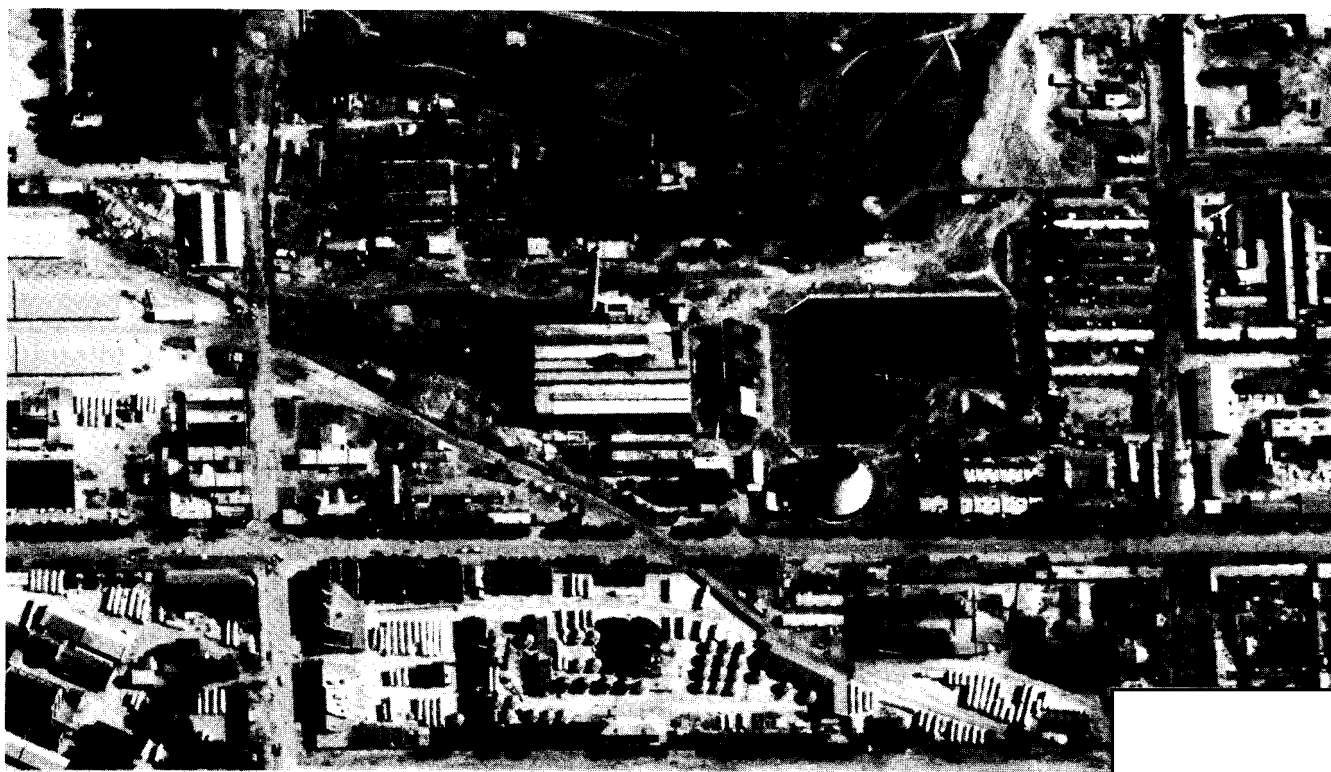
The boilerhouse is equipped with two dust catcher units, each connected by a flue to a large masonry stack. The generator hall was lacking curtain walls when first observed in [] and subsequent photography has failed to provide conclusive evidence that the facility has been completed. No power leads from the generator hall to the control house are apparent.

This facility was never observed in operation and has shown no change during the period 1962 through 1965.

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FIGURE 3

CHANG-CHUNG THERMAL POWER PLANT (MEIC)



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KIRIN (CHI-LIN) THERMAL POWER PLANT

NPIC NUMBER - 31

25X

The Kirin Thermal Power Plant is located northeast of the Kirin Highway Bridge North at coordinates 43 53 45N - 126 34 30E. The facility is rail served, coal operated and includes a sub-station with five visible transformers, control house, coal handling and processing facilities and numerous support/storage buildings. Cooling water is obtained from the Sung Hua Chiang; no cooling tower or spray ponds are present.

The power house consists of two separate boiler house sections contiguous to a single generator hall. There is an eastern section, linked to masonry stacks A and B by nine sets of flues and dust catchers, and a western section, serviced by masonry stack C, which contains two sets of flues and dust catchers, for a total of eleven boiler units. The western portion of the generator hall is connected to the sub-station by five sets of three-cable power leads. No leads are evident between the eastern section of the generator hall and control house; they could be underground or in the gallery which connects the two buildings.

There has been no significant construction or change at this plant during the 1962 through 1965 period.

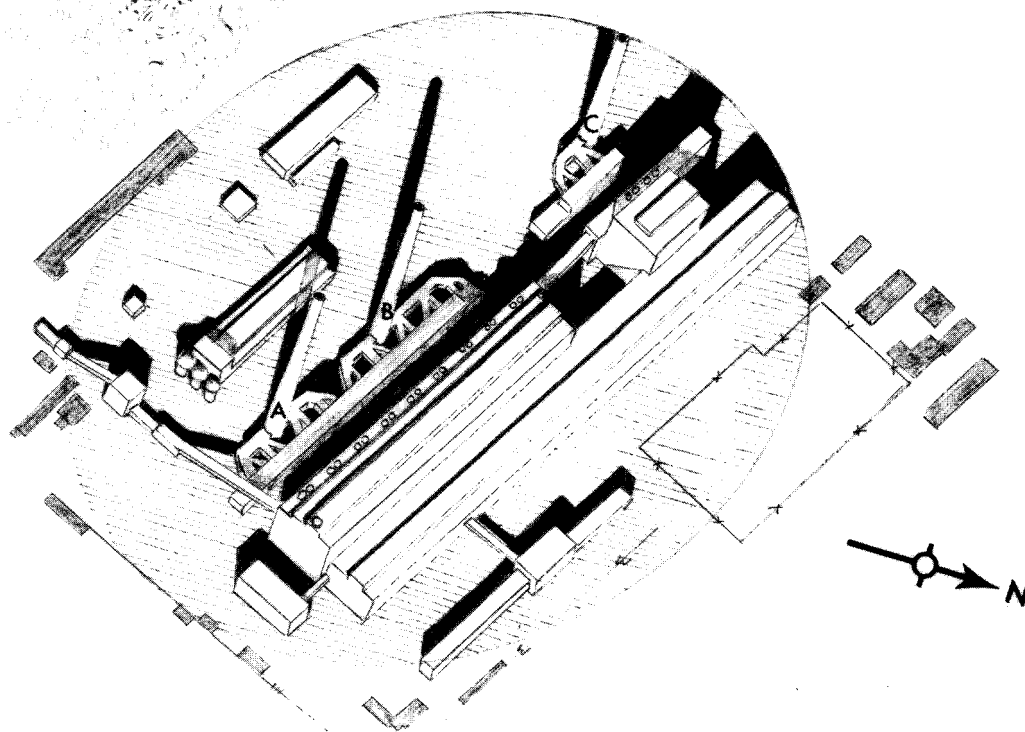
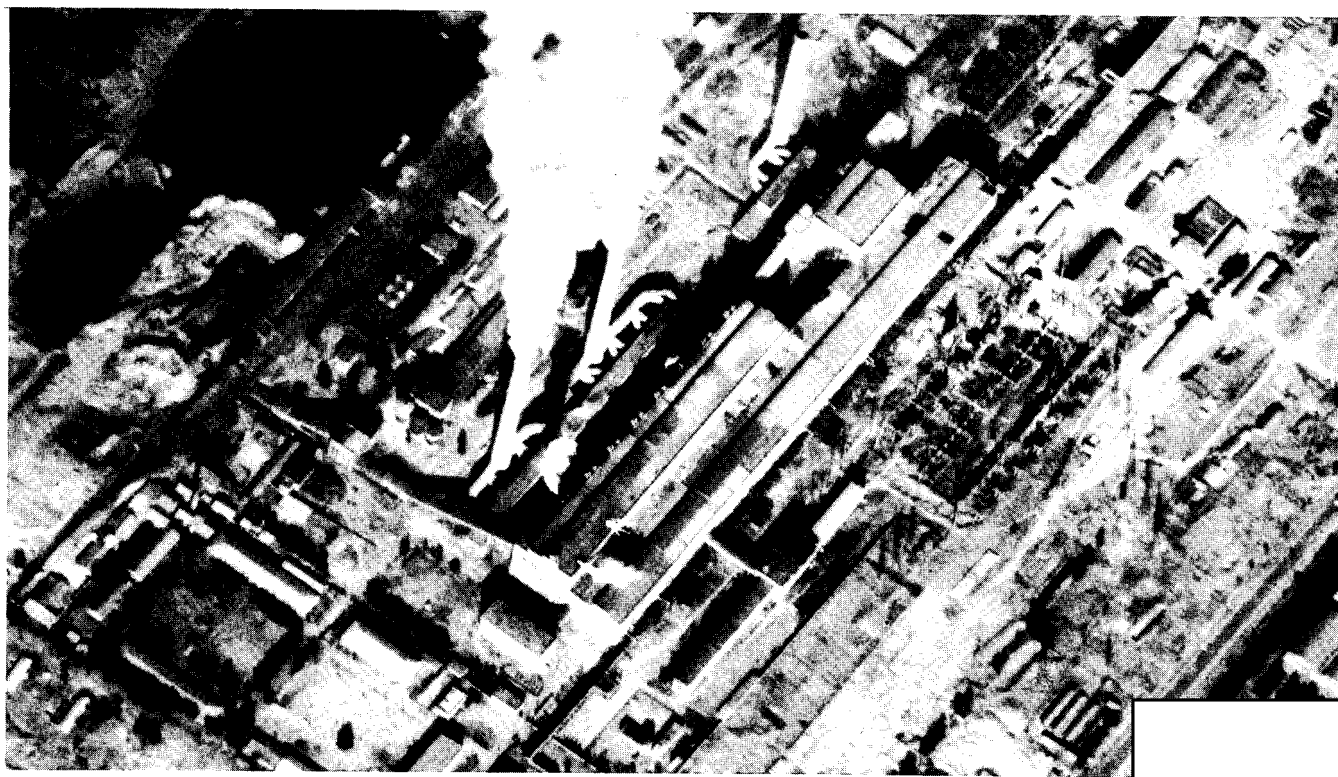
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FIGURE 4

KIRIN (CHI-LIN) THERMAL POWER PLANT



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KIRIN (CHI-LIN) THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Moderate smoke from stacks A and B.
	None	Moderate smoke from stacks A and B.
	None	Heavy smoke from stacks A and B.
	None	Moderate smoke observed coming from facility but clouds/smoke precluded analysis.
	None	Light smoke from stacks A and B.
	None	Heavy smoke from all three stacks.

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CIA IMAGERY ANALYSIS DIVISION

KIRIN (CHI-LIN) THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Heavy smoke from all three stacks.
	None	Heavy smoke from stacks A and B.
	None	Heavy smoke from stacks A and B. Moderate smoke from stack C.

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PEI-FENG THERMAL POWER PLANT

The Pei-feng Thermal Power Plant is located in central Pei-feng on the east bank of a small stream at coordinates 42 54 30N - 125 08 47E. The facility is rail served, coal operated, and includes two natural draft masonry or reinforced concrete cooling towers, one wooden cooling tower, small sub-station with one transformer and several support buildings. A larger sub-station with control house is located approximately 350 feet north of the powerhouse and is probably associated. No transformers are apparent at this facility. Foundations for a second wooden cooling tower exist, but appear to be abandoned.

The boilerhouse contains two visible sets of dust catchers and three small metal stacks, indicating at least three boiler units. The generator hall is linked to the adjacent sub-station and transformer by one set of three-cable power leads.

No new construction occurred during the period from 1963 through 1965.

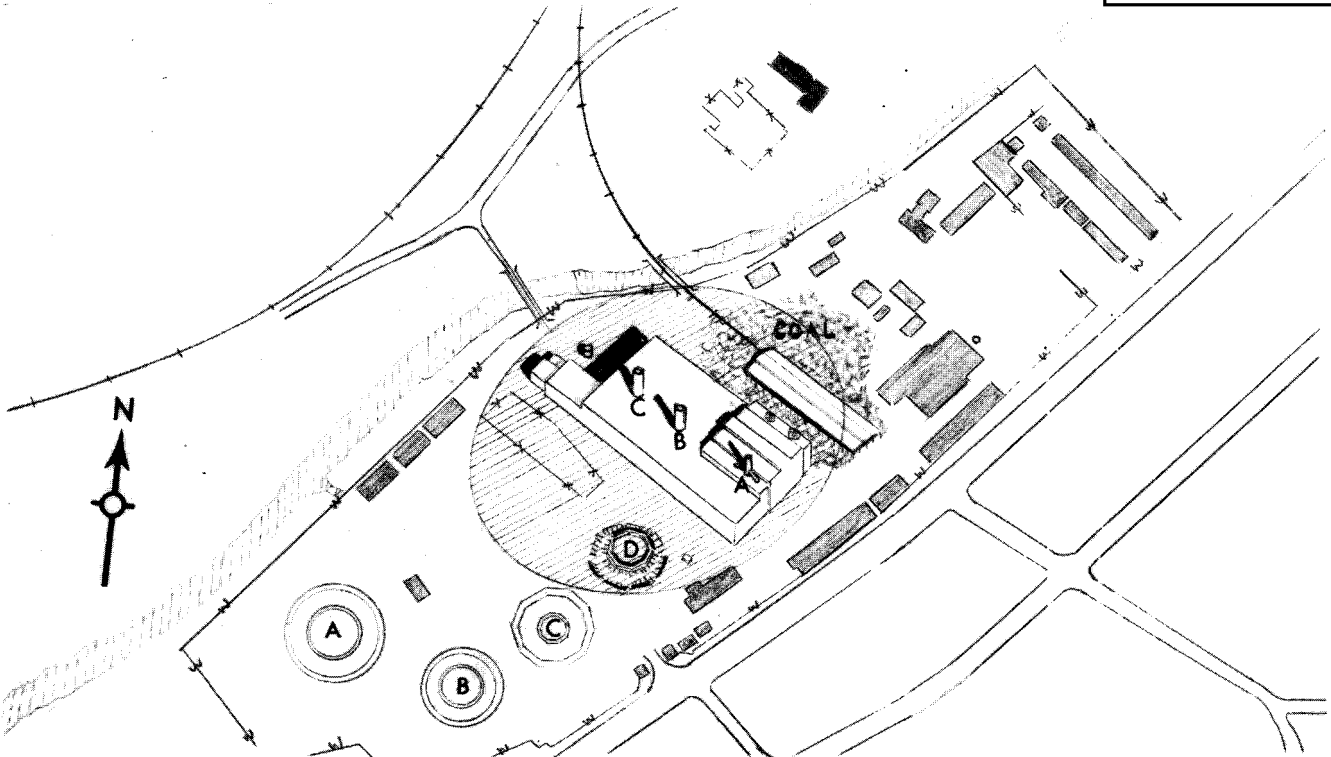
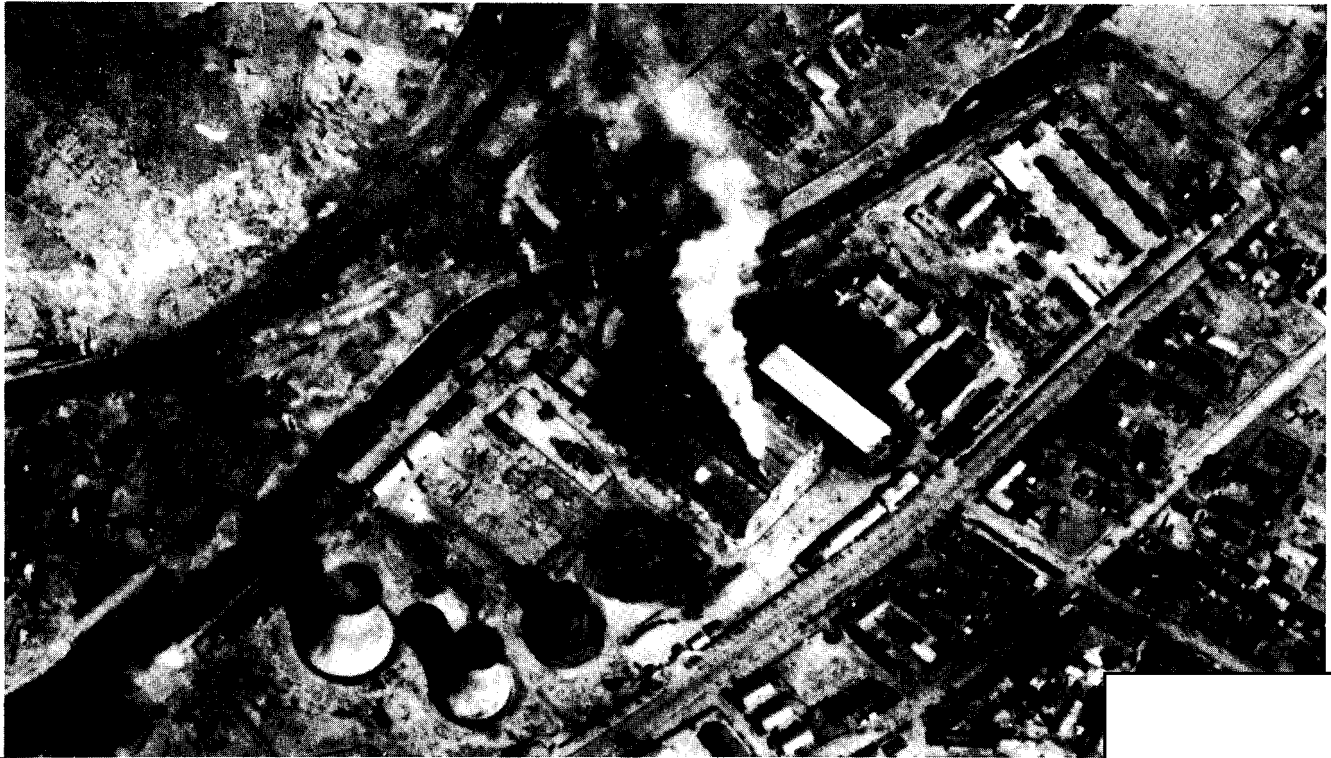
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FIGURE 5

PEI-FENG THERMAL POWER PLANT



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PEI-FENG THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	Foundations for cooling tower D in place; however, no current construction activity is apparent.	Heavy smoke from stack A. Moderate vapor from cooling towers A and B.
	None	Moderate smoke from stack A. Poor quality photo coverage precludes analysis. Moderate vapor from cooling tower A. Heavy vapor from cooling tower B.
	None	Moderate smoke from stack A. Heavy vapor from cooling towers A and B.
	None	Moderate smoke from stack A. Light vapor from cooling towers A, B, and C.
	None	Heavy smoke from stack A. Heavy vapor from cooling tower A. Poor quality coverage precludes further analysis.
	None	Moderate smoke from stack A. Heavy vapor from cooling towers A and B.

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PEI-FENG THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Moderate smoke from stacks A and B precludes analysis of stack C. Heavy vapor from cooling tower A. Moderate vapor from cooling tower C.

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CIA IMAGERY ANALYSIS DIVISION

TA-FENG-MAN HYDRO POWER PLANT

[] NPIC NUMBER - 50 25X

The Ta-feng-man Hydro Power Plant is located at the mouth of the Sungari Reservoir at coordinates 43 43 00N - 126 41 25E. The facility is a consolidated type and is equipped with at least eight water intake gates. A sub-station is located contiguous to the powerhouse and appears to contain 10 sets of switching equipment and at least three transformers. Three additional transformers are located in a sub-station situated on the river bank about 200 feet north of the powerhouse.

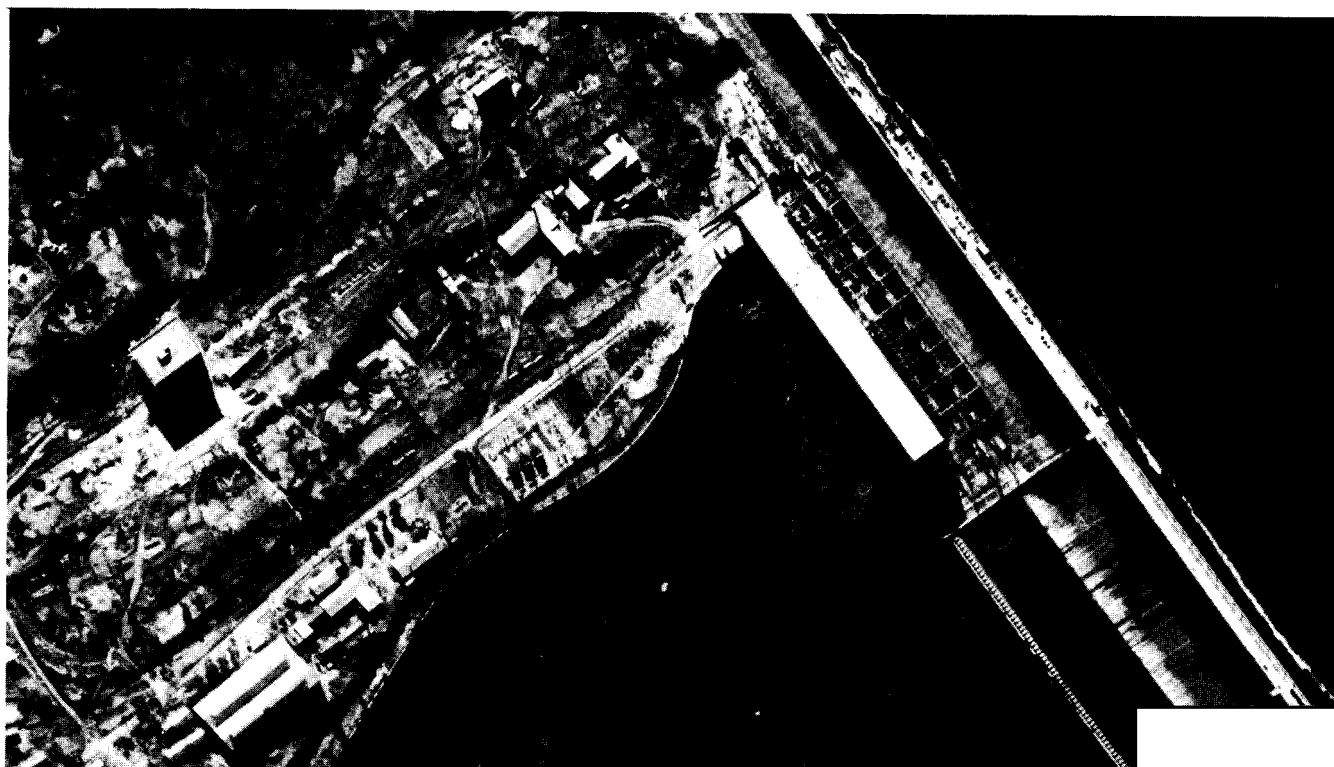
There has been no significant construction during the 1962 through 1965 period.

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FIGURE 6

TA-FENG-MAN HYDRO POWER PLANT



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TA-FENG-MAN HYDRO POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Three or four areas of light turbulence observed.
	None	No turbulence observed.
	None	No turbulence observed.
	None	Clouds preclude analysis.
	None	No turbulence observed.
	None	No turbulence observed.

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TA-FENG-MAN HYDRO POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	One area of moderate turbulence observed.
	None	Two and possibly three areas of moderate turbulence observed.
	None	No turbulence observed.

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CIA IMAGERY ANALYSIS DIVISION

TUNG-HUA THERMAL POWER PLANT

NPIC NUMBER - 66-E

25X

The Tung-hua Thermal Power Plant is located 3.5 nm northwest of the Tung-hua Railroad Bridge over the Hun Chiang (River) at coordinates 41 47 10N - 126 00 05E. The plant is rail served, coal operated, and consists of three natural draft cooling towers, one large sub-station, two control houses with at least two transformers nearby, two spray ponds with a total of ten sprinkler units, and numerous coal processing and support buildings.

The power plant is of unusual construction, doubtlessly an old facility which has been expanded. The boilerhouse appears to consist of two sections, each designed to house two boiler-units. Although the section serviced by masonry stack D has only one set of dust catchers, a second boiler-unit might be indicated by the odd placement of metal stack C.

The generator hall is also of two distinct designs and appears to be linked to two control houses. The eastern section contains at least two generators, as indicated by the two sets of power leads. The western generator section has no power leads visible, but probably contains one or two generators. This section has an adjoining control house. There is a scar, probably for an electric cable, connecting the above control house with the sub-station located northwest of the plant.

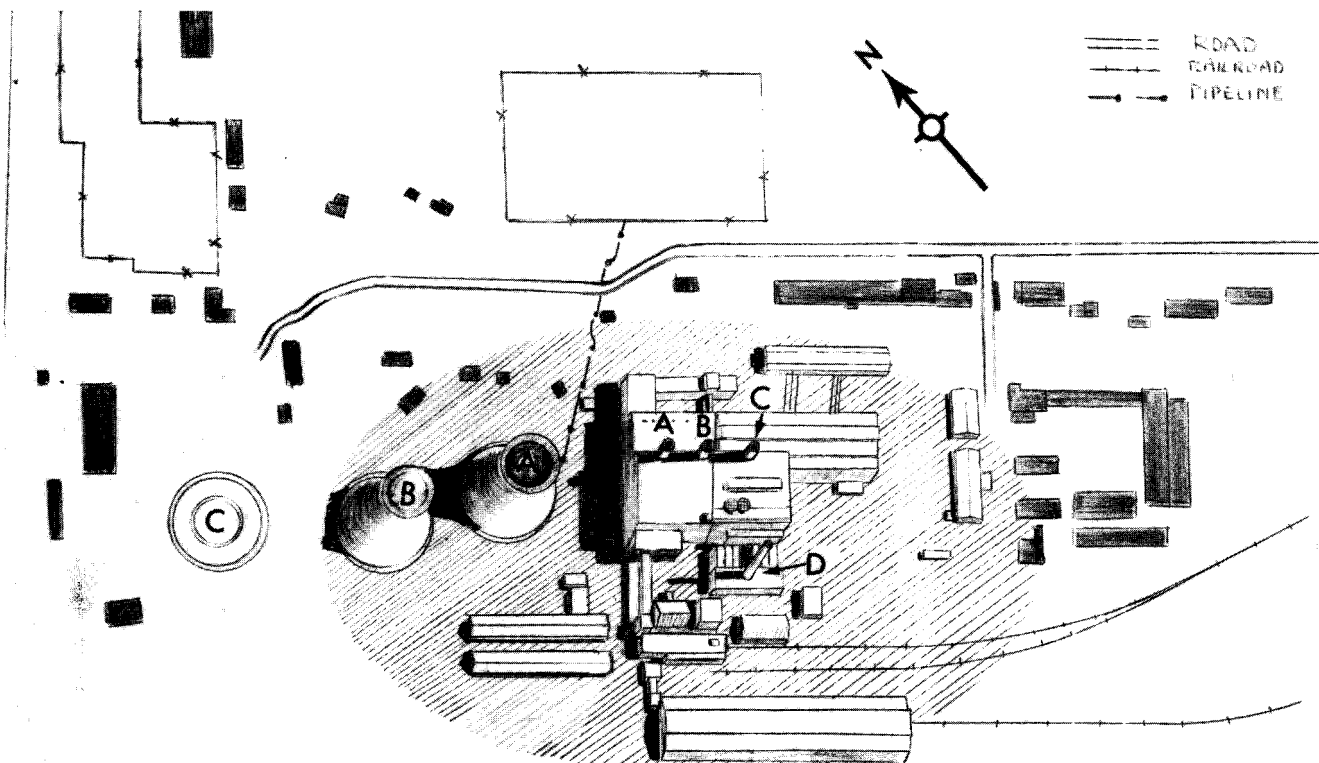
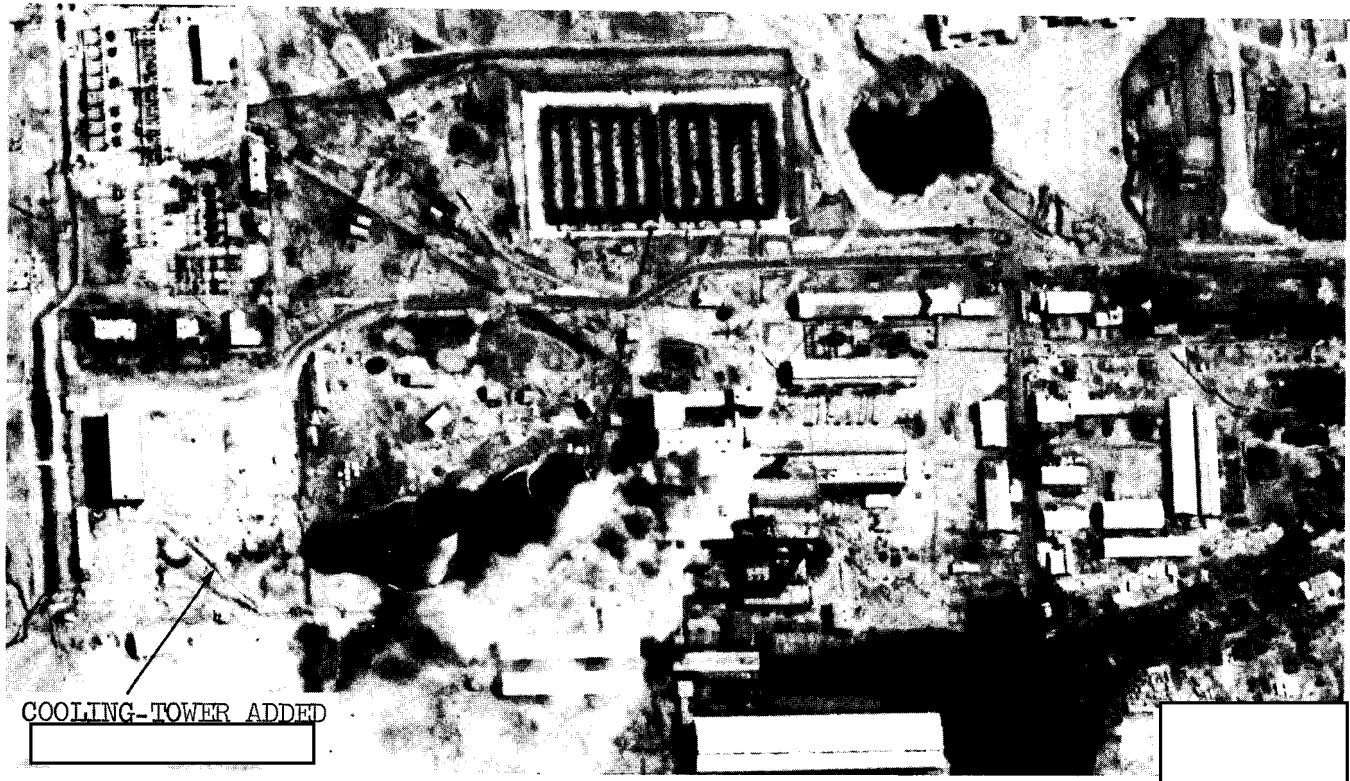
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FIGURE 7

TUNG-HUA THERMAL POWER PLANT



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TUNG-HUA THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Heavy smoke from stack A, with light smoke from stack B. Light vapor from cooling tower B. Cooling pond in operation.
	None	Moderate smoke from stacks A and B. Moderate vapor from cooling tower B. Cooling pond in operation.
	None	Heavy smoke from stacks A and B. Light vapor from cooling tower B. Cooling pond in operation.
	None	Moderate smoke from stacks A and D. Light vapor from cooling tower B. Cooling pond in operation.
	None	Heavy smoke from stacks A, B and D. Moderate vapor from cooling tower A. Cooling pond in operation.

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CIA IMAGERY ANALYSIS DIVISION

TUNG-HUA THERMAL POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	None	Heavy smoke from stacks A, B and C. Heavy vapor from cooling tower A and B. Cooling pond in operation.
	Cooling tower C is under construction.	Heavy smoke from stack A and B. Heavy vapor from cooling towers A and B. Cooling pond in operation.
	Cooling tower C is complete.	Light smoke from stack A; moderate smoke from stack D. Light vapor from cooling tower B. Cooling pond in operation.

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UNBONG HYDRO POWER PLANT

The Unbong Hydro Power Plant is located 16.6 nm northeast of Manp-ojin on the Chinese side of the Yalu River at coordinates 41 22 00N - 126 30 30E. The plant is of the separated type with the powerhouse located 0.60 nm west of the dam.

This facility has had a rapid growth since [] and is presently nearing completion. There is also evidence that the plant is in limited operation. The powerhouse is compartmented into five sections, although only four pairs of tailwater outlets are visible. A sub-station is being erected contiguous to the powerhouse and appears to contain five sets of switching equipment.

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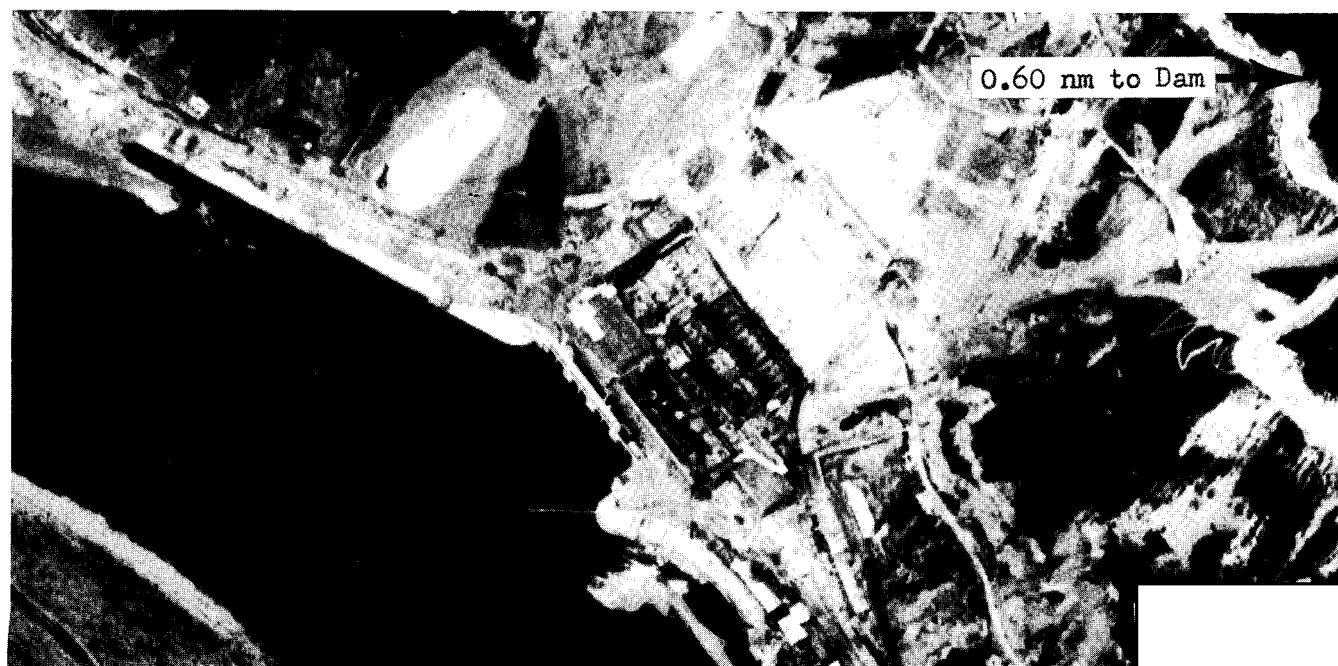
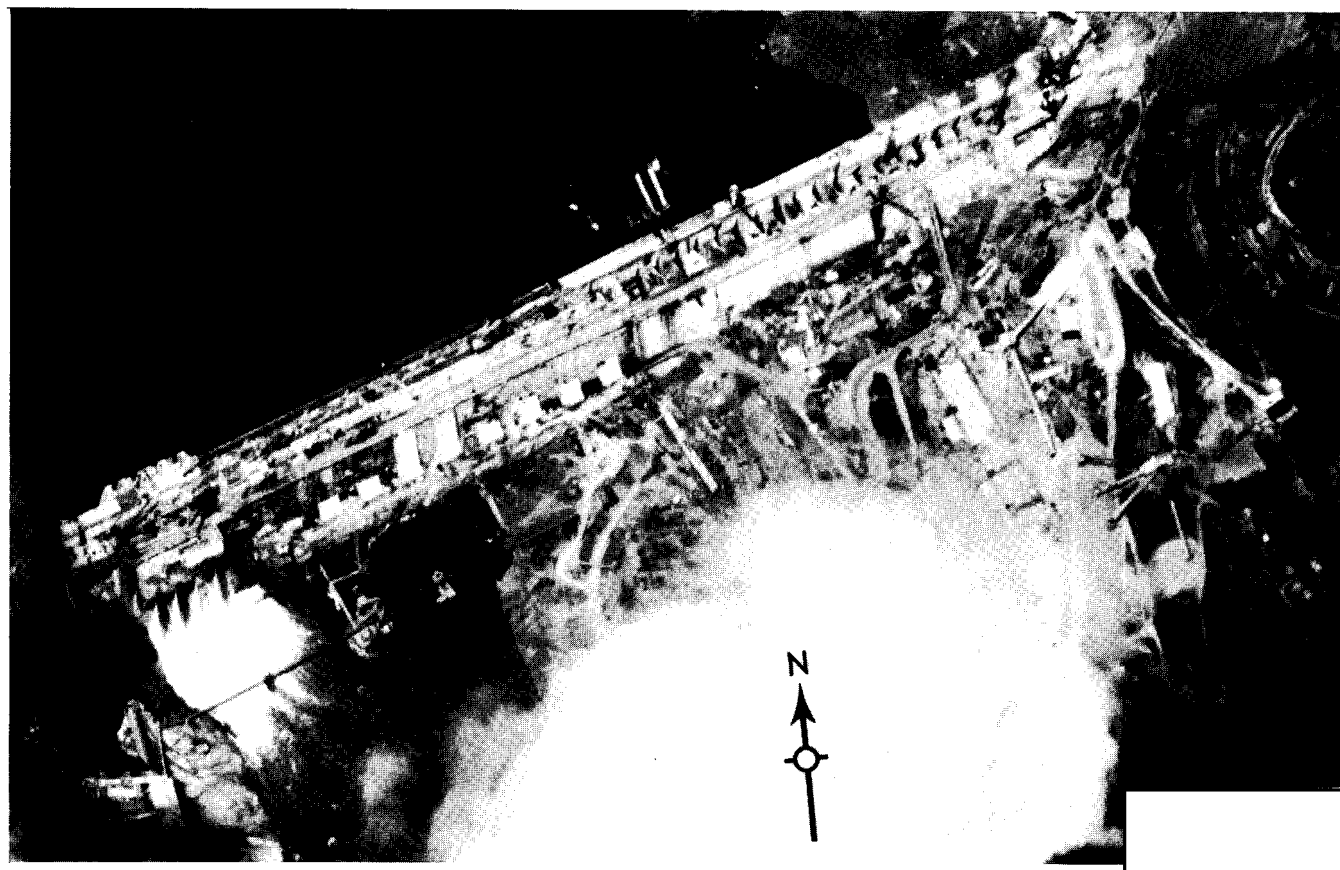
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FIGURE 8

UNBONG HYDRO POWER PLANT

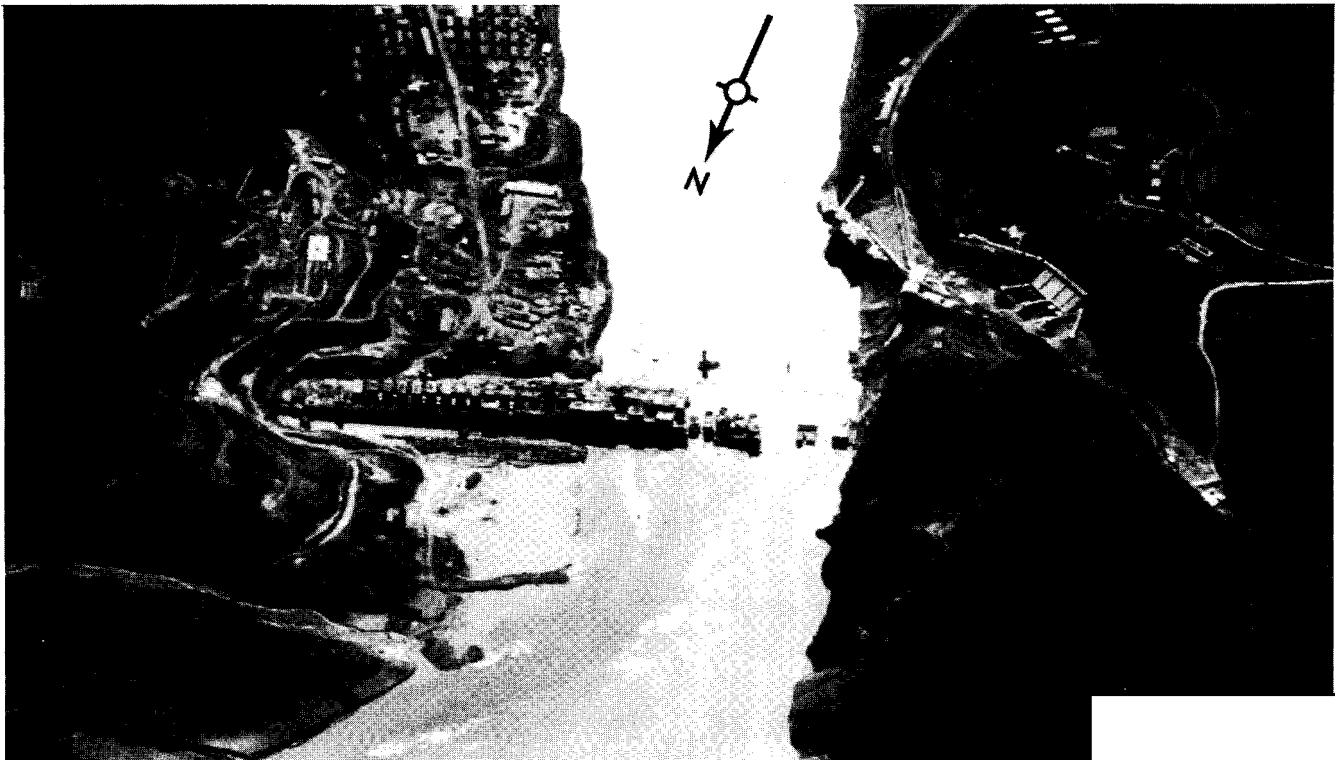


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FIGURE 9

UNBONG HYDRO POWER PLANT



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FIGURE 10

UNBONG HYDRO POWER PLANT



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UNBONG HYDRO POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	Preliminary groundwork on powerhouse is under way. Dam is under-construction and now spans approximately 1/3 the width of the Yalu.	N/A
	Some filling has occurred at the site of the powerhouse. The dam has been extended nearly the width of the Yalu.	N/A
	Little significant progress is evident at the site of the powerhouse. The dam has been slightly extended; spillway section remains to be completed.	N/A
	No apparent change has occurred at the site of the powerhouse. The dam appears to span the Yalu and the spillway section is complete.	N/A
	Powerhouse is in the first stages of construction; light framework is apparent. There was no visible change at the dam.	N/A

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UNBONG HYDRO POWER PLANT

PHOTO DATA	CONSTRUCTION ACTIVITY	LEVEL OF PRODUCTION
	No apparent change at power-house or dam. There is no water back-up at the dam.	N/A
	Poor quality photography precluded detailed analysis; however, the powerhouse seems unchanged and there continues to be no water back-up.	N/A
	The powerhouse has been completely erected; some work remains on the outer roof covering. Framework for five sets of switching equipment is apparent behind the powerhouse. Construction is almost finished at the dam. Water back-up is apparent for the first time.	N/A
	The powerhouse and dam appear to be complete; and construction on a probable surge tank is occurring above the powerhouse.	A light discoloration was evident on the water at the southern most pair of tailwater outlets; this may be light turbulence or a result of silting.

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